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ABSTRACT

In learning a second language, the student should not only learn the native speaker's patterns of phonology, morphology, and syntax; but he should also internalize the native speaker's collective view of the universe and the appropriate related behavior patterns, both linguistic and nonlinguistic. Languages divide reality into different categories, and, in learning a second language, there may be interference from the native language in understanding the new categories. Linguistic anthropologists have been mapping out categories of cultural phenomena and performing an analysis of the semantic component, using such devices as the paradigm, the taxonomy, and distributional analysis to discover the system of knowledge built up around a people's view of the world. In language instruction, lexical categories should receive systematic treatment and should be brought under the student's control on his route to native-like fluency in a foreign language. (VM)

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A. ENGLISH TO SPEAKERS OF OTHER LANGUAGES

Section 1: Cultural Interference

LANGUAGE AND CATEGORIES: SOME NOTES FOR FOREIGN LANGUAGE TEACHERS [1]

Kenneth Croft

Some of you have probably had the experience of trying to make your way around in a foreign country where the metric system was used for weights and measures, and temperature was measured in centigrade units. In addition, you probably had to deal with a different monetary system; perhaps the units were not entirely unfamiliar in relation to each other, but they were different in terms of the buying power of American dollars and cents. Assuming you had a good command of the language of the country—even a very good command of it—you still might have encountered some interference in using it at times because the measuring units differed in value from those you were accustomed to using.

Categories of Measurement

On three occasions I was a resident in Mexico City: the first time for about eleven months, the second time for about eight months, and the third time for about thirteen months. Each time I went to Mexico I had to go through a period of adjustment to the metric system in regard to distances, liquid measures, weights, the Celsius temperature scale, etc. I learned a few approximate equivalents to American measuring units once and did not have to relearn them later. For example, I found out that a kilogram was equal to approximately 2.2 pounds, so when I wanted to buy something like a pound of meat, I asked for half a kilo. I learned that a liter was a little more than a quart, and gasoline was sold by the liter; so instead of asking for ten gallons of gas, I asked for 40 liters. (This gave me about ten and a half gallons.)

Distances and temperature equivalents were not quite as simple, and they did require a certain amount of relearning. A meter, I discovered, was a little longer than a yard (one meter = 39.37 inches); this helped me with calculations of short distances. But a kilometer (1000 meters) is equal to .621 miles—somewhat more than half a mile. Nevertheless, I often found myself thinking of a kilometer as approximately half a mile in making

[1] Notes, for the most part, used in talking with groups of teachers of English to speakers of other languages during the summer of 1969 at the University of Southern California, the University of Illinois, and the California Polytechnic College at San Luis Obispo.

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quick, rough calculations of distance to certain places and also in judging the speed limit—a certain number of kilometers per hour. People who were able to make mental calculations by using fractions, I noticed, came up with more accurate equivalents; one kilometer equals approximately ⅝ of a mile.

As any former student of chemistry or physics knows, the Fahrenheit temperature scale is convertible to the Celsius (Centigrade) scale and vice versa by a formula. However, relatively few people go around making this kind of conversion quickly without using pencil and paper. A couple of reference points are good to remember, namely that 0° C equals 32° F—the point at which water freezes—and 100° C equals 212° F—the point at which water boils. Once in a while the temperature in Mexico City goes down to zero—0° C, that is, not 0° F. It gave me a start when I heard, for the first time, that the temperature might drop to zero during the night. When you want to convert Fahrenheit to Centigrade, you substract 32 and then multiply by $^5/_9$. 70° F, my favorite temperature during the day, is about 21° C.

I became fairly expert in money conversion, perhaps because of necessity. My income was in dollars, and these had to be converted into Mexican pesos. Then everything was paid for in pesos. I noticed that inflation was taking place, faster than I've ever noticed it in the States, and I had to be careful that I didn't spend money at a faster rate than I received it. In terms of American money, the peso was worth about 17 cents at first; then it dropped to a little more than 12½ cents; later it dropped further to about 8 cents. What happened may be described in two ways: we say the peso was devalued on two occasions, but from another point of view—expressed by some Mexicans—the Americans raised the price of the dollar.

Interference from Language Categories

A great deal has been written and said about interference in language learning—interference from one's native language while learning a foreign language. We read and hear mostly about interference in phonology (sound structure), interference in morphology (word structure), and interference in syntax (sentence structure). The kind of interference noted above might be called interference in vocabulary, but I think it is more precise to call it interference from language categories—the structuring of the way that people habitually think about and understand phenomena they deal with in their everyday lives.

In regard to units of measure, you might say that I lived in a world of approximations; for me there were no exact equivalents—that is, not any I could arrive at simply. Certainly the Mexican's analysis and understanding of distance, weight, temperature, and monetary values were quite different from mine. His thoughts concerning "how long" or "how far" were in terms of centimeters, meters, kilometers, and the like, whereas my thoughts were in terms of inches, feet, yards and miles. Similarly, his notion of weight was in terms of grams, kilograms, and metric tons; my notion of weight, on the other hand, was in terms of ounces, pounds, and "short" tons—categories somewhat differently graded. At a stand near the entrance to a movie one time I noticed that the price of candy was given as so much per 100 grams; I didn't know then, but I know now, that 100 grams equals 3½ ounces.

Learning the vocabulary of the metric system presents no great problem; actually, it is rather simple. The fundamental units are the meter and the gram. Designations of multiples and subdivisions of any unit can be arrived at by combining with the name of the unit the prefix *deka-*, *hecto-*, and *kilo-*, meaning, respectively, 10, 100, and 1000 and *deci-*, *centi-*, and

milli-, meaning, respectively one-tenth, one-hundredth, and one-thousandth. It may be pointed out perhaps that the measuring units of the metric system are not native categories of any natural language. Nevertheless, they are very *real* categories in most European languages, and these categories provide a set of "grooves" for thinking about distance, weight, etc.—quite different from our set of "grooves."

The examples noted above demonstrate the kind of interference that may result when phenomena are categorized and viewed differently by the speakers of different languages. Whether formal linguistic categories or semantic categories, they still influence the thinking of the people who speak the language. According to Edward Sapir, ". . . the 'real world' is to a large extent unconsciously built up on the language habits of the group . . ." [2]

The Sapir-Whorf Hypothesis

There are many statements in the writings of Edward Sapir [3] and Benjamin Lee Whorf [4] to the effect that our thoughts, our ideas, and our views of the universe are shaped considerably by our language—including, of course, the formal and semantic categories of our language. Some of these statements have been cited hundreds of times in linguistic and anthropological literature and have, in a sense, become classic statements; the notions contained in them have been designated as the "Sapir-Whorf Hypothesis" (of linguistic relativity). Whorf states that "We cut nature up, organize it into concepts, and ascribe significances as we do, largely because we are parties to an agreement to organize it in this way—an agreement that holds throughout our speech community and is codified in the patterns of our language." [5]

Both Sapir and Whorf say there is relatively little if any awareness of the intricate workings of the language on the part of the speaker while he is speaking his native language. Whorf states ". . . that the phenomena of a language are to its speakers largely of a background character and outside the critical consciousness and control of the speaker. . . ." [6]

The Sapir-Whorf Hypothesis has been restated, explicated, and elaborated in various ways by social scientists, sometimes with evidence that tends to support it and sometimes with evidence that tends to refute it. After many years of research, however, there still appears to be insufficient evidence to prove anything conclusively about the S-W Hypothesis; it remains pretty much controversial. In 1953 Harry Hoijer stated the central idea of the S-W Hypothesis in this way: "Each language has its own peculiar and favorite devices, lexical and grammatical, which are employed in reporting, analyzing, and categorizing experience." [7]

Whorf's notion was that language directed the perceptions of its speakers besides providing habitual modes of analyzing experience into significant categories. But Hoijer was more conservative; he stated that "Languages . . . do not so much determine the perceptual and other faculties vis-ā-vis experience as they influence and direct these faculties into pre-

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[2] "The Status of Linguistics as a Science." In **Selected Writings of Edward Sapir in Language, Culture, and Personality**, ed. by David G. Mandelbaum. Berkeley and Los Angeles: University of California Press, 1949, p. 162.

[3] **Ibid., pp. 1-166, passim.**

[4] **Language, Thought, and Reality: Selected Writings of Benjamin Lee Whorf**, ed. by John B. Carroll. Cambridge, Mass.: The M.I.T. Press, 1956. **Passim.**

[5] **Ibid, p. 213.**

[6] **Ibid, p. 211.**

[7] "The Sapir-Whorf Hypothesis." In **Language in Culture: Conference on the Interrelations of Language and Other Aspects of Culture**, ed. by Harry Hoijer. Chicago: The University of Chicago Press, 1954. p. 95.

scribed channels."[8] This more conservative position seems to be favored by linguists and anthropologists today. I think John B. Carroll's restatement of the S-W Hypothesis, in the light of recent relativity theories, is not untypical: "Insofar as languages differ in the ways they encode experience, language users tend to sort out and distinguish experience differently according to the categories provided by their respective languages. These cognitions will tend to have certain effects on behavior."[9]

Number Categories

Those of you who teach English to orientals will be familiar with this situation: There is a huge class of English nouns which we often refer to as "count nouns" or "countable nouns." These for the most part have different forms for the SINGULAR (one) and PLURAL (more than one). The choice of the singular or plural affects the syntax; for example, we use *this, that,* and *is* with the singular and *these, those,* and *are* with the plural. But even after studying English for eight or ten years, many of my oriental students are still unable to make this singular-plural distinction consistently—that is, in the way that native speakers make it. Their tendency is to ignore the fact that English has separate categories denoting *one* and *more than one* and use only the former.

The speaker of Chinese, Japanese, or Korean is not forced by the conventions of his language to specify one or more than one when he talks about certain objects in the world and, consequently, is not compelled to think of them in such terms. In other words, singular and plural are not grammatical categories in Chinese, Japanese, and Korean, as they are in English and many other languages. Oriental languages have ways of expressing the difference between one and more than one, but if this difference is not particularly important in what the speaker is saying, he does not habitually express it. The English speaker, on the other hand, is forced by the conventions of his language to express this difference, whether it is important or not. I imagine the average native speaker of English would be hard put to find examples in which he considered the singular-plural distinction unnecessary, whereas the oriental, I imagine, would not be able to come up with a plentiful number of cases in his language in which he considered the distinction to be necessary. Here we see two separate ways of categorizing and reporting information about objects: indifference in regard to number on the one hand, and a compulsory distinction between one and more than one on the other.

Pronoun Systems

In doing their analytical work, linguists map out the grammatical categories they find in a language. A linguist, for example, might show his analysis of the subject forms of English personal pronouns as in Figure 1.

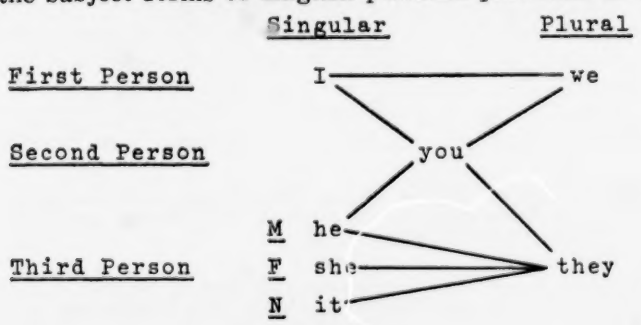

Figure 1

[8] Ibid, p. 94.
[9] "Linguistic Relativity, Contrastive Linguistics, and Language Learning." International Review of Applied Linguistics 1.1-20 (1963), p. 12.

He would then point out that a gender distinction (masculine, feminine, and neuter) is found only in the third person singular, "you" is nonspecific as to number (singular or plural), and "we" means "I and one or more others."

Traditionally we show these pronouns as six points on a chart (see Figure 2), perhaps because the pronouns of other European languages generally pattern out this way.

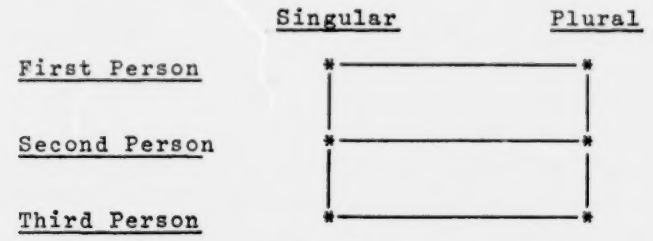

Figure 2

If we now examine pronominal reference in Samoan similarly, we come out with a fairly different chart. (Compare Figure 3 with Figure 2.) In-

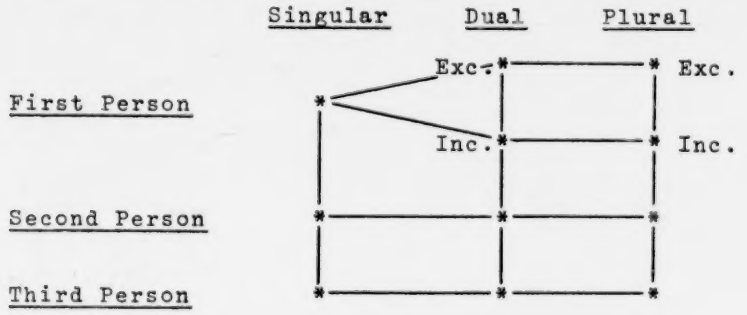

Figure 3

stead of the English two-way number system (singular and plural), we have a three-way number system: singular (one), dual (two), and plural (more than two). The notion of singular in all persons compares well in both languages, except that the English gender distinction in the third-person singular is not found in Samoan. On the other hand, we find much more elaboration in Samoan when we compare the notion of "more than one" in the two languages. The Samoan dual appears to carry with it a good deal of the time something like the English idea of "couple."

People with only a European-language orientation generally find the dual requires at least a minor adjustment of habit: the notions of "you-more-than-one" and "they," for example, have to be redistributed as "you-couple," "you-more-than-two," and "they-couple," "they-more-than-two." More than just a minor adjustment is necessary for the notion of "we," for we find the inclusive and exclusive in both the first-person dual and first-person plural. There's a four-way system in Samoan, all translated into English as *we:* "you (singular)-and-I" (inclusive), "I-and-one-other-but-not-you" (exclusive) and "you (singular)-and-I-and-one-or-more-others" (inclusive), "I-and-others-but-not-including-you" (exclusive).

Use of person-number contrasts for indicating pronominal reference, as shown in the English and Samoan examples above, may be less efficient sometimes than other kinds of contrast. Harold Conklin's componential analysis of Hanunoo pronouns is a good example of this, and I think he

comes closer to a conceptual code in his kind of treatment.[10] Note first the traditional charting of Hanunoo pronouns in Figure 4. Conklin saw there

	Singular	Dual	Plural
First Person	kuh	tah	mih (exclusive) tam (inclusive)
Second Person	muh	-	yuh
Third Person	yah	-	dah

Figure 4

were eight terms here in an assymetrical arrangement and suggested there might be an underlying scheme of components other than the usual ones for person and number. The ones he extracted from his data were: inclusion of the speaker (S) or exclusion of the speaker ($\overline{S}$), inclusion of the hearer (H) or exclusion of the hearer ($\overline{H}$), and minimal membership (M) or nonminimal membership ($\overline{M}$).[11] He then constructed a box with a pronoun at each corner, the location representing an intersection of these three dimensions of contrast. (See Figure 5.) All the pronouns on the front

dah	$\overline{M}$	$\overline{S}$	$\overline{H}$
yuh	$\overline{M}$	$\overline{S}$	H
mih	$\overline{M}$	S	$\overline{H}$
tam	$\overline{M}$	S	H
yah	M	$\overline{S}$	$\overline{H}$
muh	M	$\overline{S}$	H
kuh	M	S	$\overline{H}$
tah	M	S	H

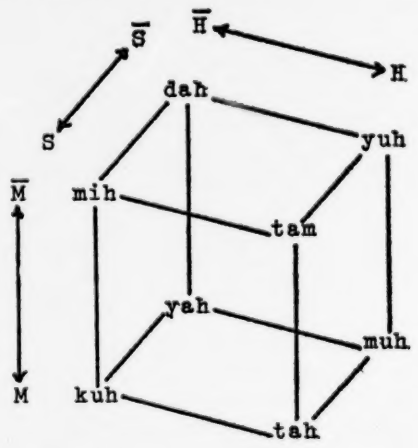

Figure 5

of the box include the speaker, and those on the back exclude the speaker; the pronouns on the right include the hearer, and those on the left exclude the hearer; the pronouns at the bottom show minimal membership, and those at the top nonminimal membership.

Paradigms

The kind of chart just described is sometimes called a *paradigm*, defined by Lounsbury as "any set of linguistic forms wherein: (a) the meaning of every form has a feature in common with the meanings of all the other forms of the set, and (b) the meaning of every form differs from

[10] "Lexicographical Treatment of Folk Taxonomies." In **Problems in Lexicography**, ed. by Fred W. Householder and Sol Saporta. Bloomington, Ind.: Indiana University Research Center in Anthropology, Folklore, and Linguistics, 1962. pp. 134-135.

[11] "Minimal membership" seems to be roughly equivalent to "finite number," and "nonminimal membership" to "indefinite number."

that of every other form of the set by one or more additional features." [12] The charts representing English and Samoan pronouns may be called paradigms, too, since they meet the criteria noted in (a) and (b). Conklin's paradigm of Hanunoo pronouns is reminiscent of the Prague School charts indicating distinctive phonological features. For example, the phonological components of Turkish vowels (eight altogether) might be shown by a box with a vowel at each corner, indicating three dimensions of contrast: high versus low, front versus nonfront, and rounded versus unrounded. We would not ordinarily call this a paradigm, however, because phonological features, rather than features of meaning, would be represented.

The paradigm is a componential analysis device which shows systematically the intersection of semantic features. Grammarians have used this device for a long time in the representation of grammatical meanings of linguistic forms—the representation of grammatical categories. More recently linguistic anthropologists have made use of the paradigm to sort out semantic components of other terminological systems, in an attempt to classify (categorize) cultural phenomena as viewed by native speakers of a given language. A notable example of this is the terminology of kinship systems, [13] but other *domains* (sets of semantically related terms), or at least parts of domains, seem to lend themselves to paradigmatic analysis, too. For instance, in the following arrangement of terms dealing with livestock we can clearly see the intersection of semantic components: [14]

sheep	ram	ewe	lamb
hogs	boar	sow	pig
horses	stallion	mare	colt
cattle	bull	cow	calf
chickens	rooster	hen	chick

Taxonomies

Another componential analysis device used by linguistic anthropologists for similar purposes (actually more widely used than the paradigm) is the *taxonomy*. Instead of showing intersections of semantic components, the taxonomy is a hierarchical arrangement of terms showing inclusion and contrast. In a simple taxonomy of, say, American money we could list coins—penny, nickel, dime, quarter, etc.—and bills—$1, $5, $10, $20, etc. We note these on a branching diagram in Figure 6. At the first level we

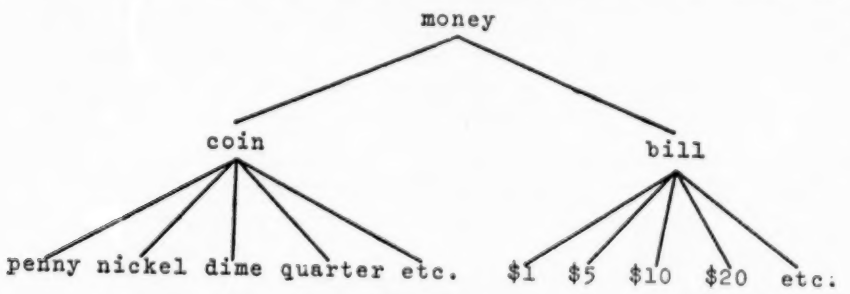

Figure 6

[12] "The Structural Analysis of Kinship Semantics." In **Proceedings of the Ninth International Congress of Linguistics.** The Hague: Mouton and Co., 1964.

[13] A number of kinship studies on this model have been reprinted in **Cognitive Anthropology,** ed. by Stephen A. Tyler. New York: Holt, Rinehart and Winston, Inc., 1969.

[14] **Cf. Ibid.,** pp. 8-10. See also "Anthropological Aspects of Language: Animal Categories and Verbal Abuse," by Edmund Leach. In **New Directions in the Study of Language,** ed. by Eric H. Lenneberg. Cambridge, Mass.: The M.I.T. Press, 1964. p. 48.

have the domain label "money." At the second level, "coin" and "bill" contrast but are included in the first-level term "money." At the third level, "penny, nickel, dime, quarter, etc." contrast but are included in the term "coin"; similarly, $1, $5, $10, $20, etc." contrast but are included in the term "bill." In a taxonomic arrangement, items at a lower level are kinds of items in higher levels.

The structure of domains may differ slightly to considerably from language to language. (Even the domains themselves may show a good deal of overlap from language to language.) Color categories provide a good illustration of how people throughout the world divide the color spectrum variously,[15] and they provide further examples of taxonomic arrangement. For English we might list eleven "basic" color terms: white, black, red, green, yellow, blue, brown, pink, purple, orange, and gray. At the next lower level we might, in turn, list the kinds of "red, green, brown, etc." As kinds of red we could list "maroon, scarlet, crimson, cock's comb, turkey red," and the like. Such terms as the latter are in my passive vocabulary, but I seldom use them in daily activities.

Conklin's list of Hanunoo color classes, on the other hand, is quite different: [16]

*(ma)lagti*ʔ—white, light tints of other colors and mixtures.

(ma)biru—black, violet, indigo, blue, dark green, dark gray, and deep shades of other colors.

*(ma)rara*ʔ—maroon, red, orange, yellow, mixtures in which these qualities seem to predominate.

(ma)latuy—light green, mixtures of green, yellow, and light brown.

Ordinarily, the meanings of color categories are expressed in terms of hue, saturation, and brightness. Conklin notes, however, that certain other components, namely dryness or desiccation and wetness or freshness (succulence), are relevant semantic features in Hanunoo color terms.[17] He also points out that a lower-level terminology can be applied when greater color specification is required.[18]

Like the paradigm, the taxonomy attempts to show how the native speakers of a given language slice up reality into named categories. There is good evidence, I believe, that conceptual patterns and systems in lexicography can be discovered and mapped out by means of these devices. The methodology of linguistic anthropologists in this regard, described in several places, is rigorous and exacting.[19] Before leaving the matter of taxonomies, I want to mention that only a few extensive ones have ever been worked out in depth, and fewer still have ever been published.

Figure 7 gives a partial taxonomy of the Navaho animal kingdom.[20] We can make a few inferences from this chart and check them with a more

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[15] An excellent detailed treatment of color categories can be found in **Basic Color Terms: Their Universality and Evolution**, by Brent Berlin and Paul Kay. Berkeley and Los Angeles: University of California Press, 1969.

[16] "Hanunoo Color Categories." **Southwestern Journal of Anthropology** 11:339-344 (1955).

[17] **Ibid.**, pp. 342-343.

[18] **Ibid.**, p. 343. A question is sometimes raised about color perception when a given language contains fewer color terms than we have. Actually, color categories of different languages reflect a different division of the spectrum; these categories may be less finely graded than ours or perhaps more finely graded in some cases. The fact that the same term in a particular language applies to what we call "blue" and "green" doesn't mean that the speaker of the language can't see the difference between these two "colors." If the need arises to make a distinction between the two, he has a way of doing it. But habitually he labels what we call "blue" and "green" in the same way.

[19] See Tyler's (**op. cit.**) Introduction, Parts I and II, particularly "Notes on Queries in Ethnography" by Charles O. Frake and "Eliciting Folk Taxonomy in Ojibwa" by Mary B. Black. Note also the bibliographical references accompanying these two papers.

[20] "Navaho Systems of Classification: Some Implications for Ethnoscience," by Norma Perchonock and Oswald Werner. **Ethnology** 8:229-242 (1969).

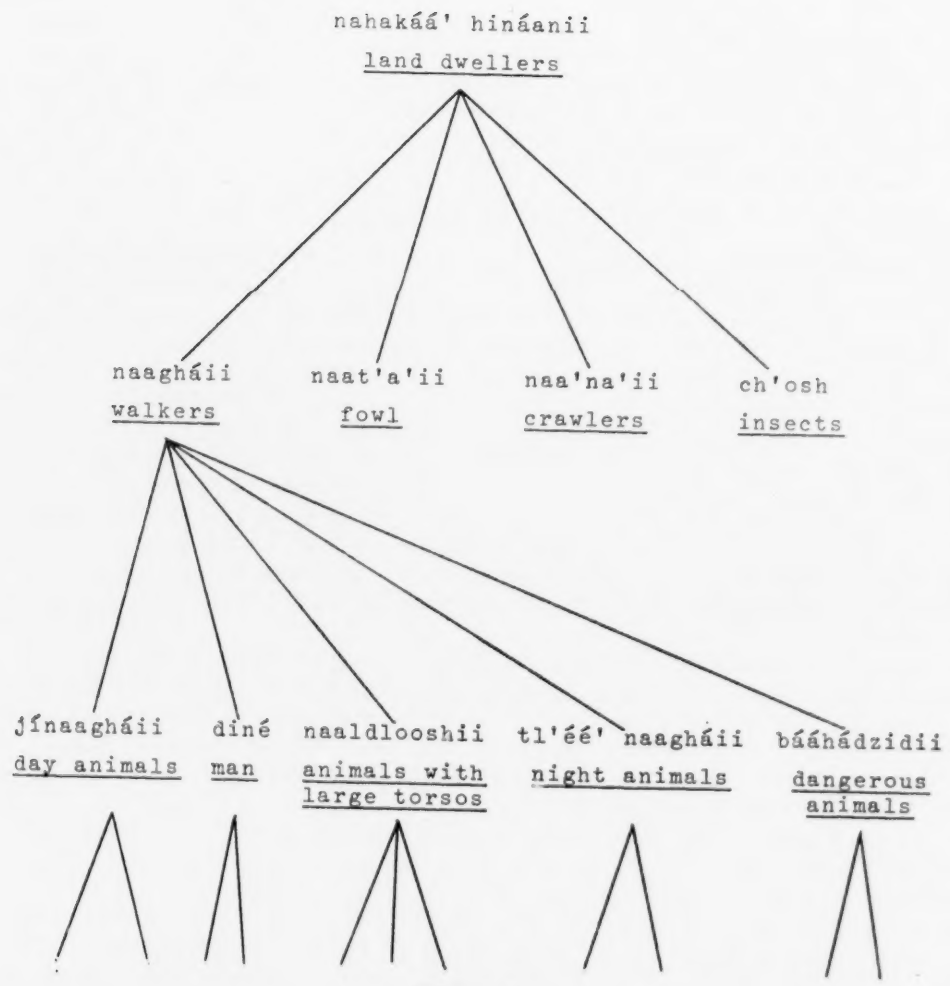

Figure 7

complete set of data. "Land dwellers" at level one possibly contrasts with a term for "water creatures," and it may be that the two are included in some higher-level term. In an English-language classification we might discriminate the two similarly—"land creatures" and "water creatures"—but we would also have an "intermediate" class of "amphibious creatures." At level two, we might guess that "walkers, fowl, crawlers, and insects" overlap our English categories "animals (including 'human animals'), birds, reptiles, and insects" pretty well. But at level three we would not consider "man" as one among several classes of animals; except in some kind of scientific zoological classification, this would seem un-English. Also the classes "day animals, animals with large torsos, night animals, and dangerous animals" are unfamiliar. In English, I imagine we would classify animals as tame or wild at this level, then tame animals as pets or livestock at the next lower level, and then animal names at the following level—something like that. In regard to wild animals, we might distinguish game animals from non-game animals at the next lower level, and give animal names at the following level. This classification in English is all impressionistic and, I suppose, "folk." [21]

[21] Cf. Leach, op. cit., p. 41.

Partial taxonomies appear here and there in anthropological and linguistic literature, and many of them seem to be concerned with demonstration of method rather than providing taxonomic information. Now that a number of ethnographers have incorporated taxonomic mapping into their field procedures, we can expect to see an abundance of taxonomic studies in the future. Some ethnographers are even using computers to aid them in sorting and arranging their field data.

Distributional Analysis

Paradigms and taxonomies are neat and orderly. But efforts in componential analysis at time produce only lists of terms and (sometimes) subclasses of these terms. Charting them seems to reveal nothing of particular significance. Nevertheless, the domains and categories under investigation are presumably no less important than others, so they must be treated in some fashion. Listing may be the most efficient means of presentation.

Nouns in many languages fall into classes we call *gender*. In English we use the labels "masculine, feminine, and neuter" and determine the gender of nouns by the pronouns used to substitute for them. These labels lack precision, but they are meaningful in most cases—less arbitrary than the gender labels for Spanish and French. In addition to formal grammatical distinctions in the English gender system, there are also semantic distinctions. And these distinctions influence our thinking about objects in the universe.

Gender classes in the Algonquian languages are labeled "animate" and "inanimate." These labels lack complete precision, too, in terms of Western science, but the two classes tend to force Algonquian speakers to make a mental separation between living and nonliving things. Navaho has an elaborate gender system—something like twelve gender classes—which appear to be based in part on shapes of objects.

Landar and Berlin have made studies of the eating vocabulary of Navaho and Tzeltal respectively.[22] Both languages contain seven verbs which we translate into English as "eat." One is a general verb for eating used, for example, in questions. The others divide all foodstuffs into six classes. Navaho categories, given by Landar, are (1) "eating in general," (2) "hard or chewy object," (3) "long, stringy object," (4) "meat," (5) "one round object," (6) "mushy matter," and (7) "separable objects." Tzeltal categories given by Berlin, are similar: (1) "eating in general," (2) "chewy object with pulp expectorated," (3) "meat," (4) "mushy or gelatin-like objects," (5) "individuated, hardish objects," (6) "breadstuffs," and (7) "foods which dissolve in the mouth with little mastication."

Berlin notes that "chili pepper" and "mushroom" are included in the category labeled "meat," and Tzeltal speakers readily offer folk theories to account for this. The documentation of his field experience in gathering and classifying food terms clearly shows that these categories have cultural significance to speakers of the language. But the food categories of both Navaho and Tzeltal are grammatical categories (as are the gender classes noted above); a particular food item governs the choice of verb. Landar and Berlin give descriptive labels in English to these categories based on something the class-members have in common. There may or may not be corresponding labels in Navaho and Tzeltal—probably not.

A taxonomic arrangement, as mentioned earlier, is an arrangement of semantic categories based on inclusion: items at a lower level are kinds of

[22] "Seven Navaho Verbs for Eating," by Herbert Landar. **International Journal of American Linguistics** 30:94-96 (1964). "Categories of Eating in Tzeltal and Navaho," by Brent Berlin. **International Journal of American Linguistics** 33:1-6 (1967).

items at higher levels. Other semantic categories may be based on use or function or some other means of classification. Metzger and Williams have made a study of Tzeltal firewood using distributional analysis of linguistic contexts.[23] Their field methodology, involving the formulation of frames and eliciting of responses, lead to the establishment of categories along various lines of cultural organization. Additional studies using this or similar techniques have been made of weddings, curers, diseases, deities, law, and perhaps other domains.[24]

Conclusion

As a high-school student of Spanish many years ago, I remember that my teacher and others told me I should learn to "think in the language." They assured me that when I reached that goal I would no longer speak Spanish hesitantly or haltingly; my responses would be automatic and "natural." My notion of "thinking in the language," I know, was pretty vague at that time. I probably considered my task as learning to put words together as the native speaker did, and this could be accomplished by learning a lot of words and the rules for putting them together. I wonder if the people who advised "learning to think in a foreign language" really understood the implications of that expression; I doubt it. My notion of that expression certainly changed later on when I became an English teacher in Mexico and started gaining some familiarity with native languages spoken in that country.

As of now, I'm not sure that "learning to think in a foreign language" means anything. If it does mean something, it's certainly something much more ambitious than I previously realized. A language student would not only internalize the native speakers' patterned habits in regard to phonology, morphology, and syntax, he would also internalize the native speakers' collective view of the universe and the behavior patterns appropriate to and consistent with this view—both linguistic and nonlinguistic. It is inconceivable to me that linguistic and nonlinguistic behavior can be separated; even if we make such a separation (artificially), we still have to learn about the latter through language.

We don't know (and perhaps will never know) everything that underlies language behavior. Language categories—grammatical and lexical—certainly play a significant role in what we call the native speakers' world view and the patterned habits and responses that accompany such a view. This paper has dealt in part with interference from language categories in language learning. Traditionally, linguists have mapped out and described grammatical categories. In recent years, linguistic anthropologists have been busy mapping out categories of (other) cultural phenomena utilizing theories, research methods, and analytical devices which are similar to those of the linguist.

The other part of this paper has dealt with the methodology of linguistic anthropologists in discovering and describing language categories which lack the formal characteristics of grammatical categories; this

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[23] "Some Procedures and Results in the Study of Native Categories: Tzeltal 'Firewood'." **American Anthropologist** 68:389-407 (1966).

[24] "A Formal Ethnographic Analysis of Tenejapa Ladino Weddings," by Duane Metzger and Gerald Williams. **American Anthropologist** 65:1076-1101 (1963). "Tenejapa Medicine I: the Curer," by Duane Metzger and Gerald Williams. **Southwestern Journal of Anthropology** 19:216-234 (1963). "The Diagnosis of Disease among the Subanun of Mindanao," by Charles O. Frake. **American Anthropologist** 63:113-132 (1961). "Ethnographic Description and the Study of Law," by Mary Black and Duane Metzger. **American Anthropologist** 66 (Part 2, Special Publication):141-165 (1965). "A Structural Description of Subanun 'Religious Behavior'," by Charles O. Frake. In **Explorations in Cultural Anthropology**, ed. by W. H. Goodenough. New York: McGraw Hill, Inc., 1964.

amounts to analysis of semantic components. The devices include the paradigm, the taxonomy, and distributional analysis for identifying and mapping semantic categories of a language—categories which reflect a system of knowledge built up around a people's view of what the world is like. As an approach to ethnography, these procedures, descriptions, etc. are called *ethnoscience, ethnographic semantics,* or simply *componential analysis.*

My emphasis is on the fact that semantic (or lexical) categories are discoverable and describable by means of componential analysis. And when these categories are known, they can be learned by language students, just as grammatical categories are learned—perhaps with ease, perhaps with difficulty. I think it largely depends on how readily the student comes to accept the idea of diversity in the classification of cultural phenomena. We all know from experience that learning to accept the notion that one's own grammatical categories are not universal is no simple matter. Learning lexical categories may be a step higher in sophistication, but these categories should receive systematic treatment and be brought under the student's control on his route toward nativelike fluency in a foreign language.

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